

Grade 10 Review:

Let's Try these together:

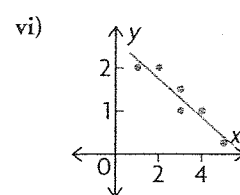
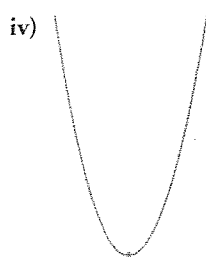
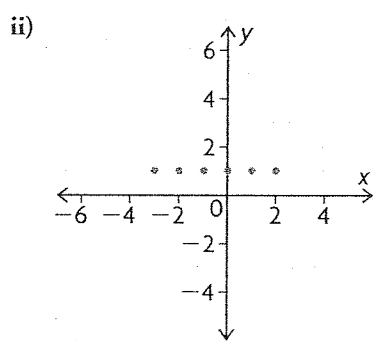
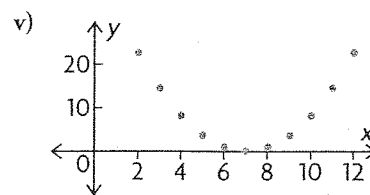
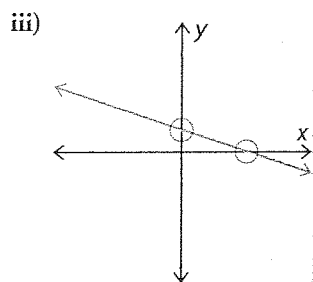
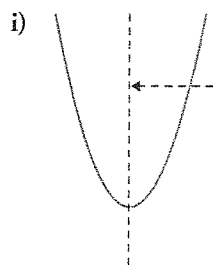
WORDS You Need to Know

1. Match the term with the picture or example that best illustrates its definition.

- a) linear relation
- b) quadratic relation

- c) vertex of a parabola
- d) axis of symmetry of a parabola

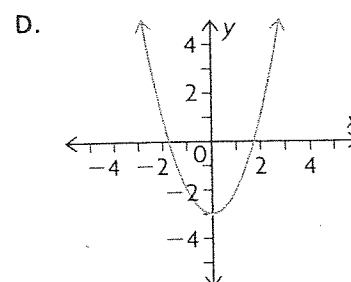
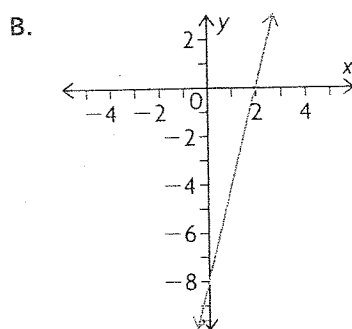
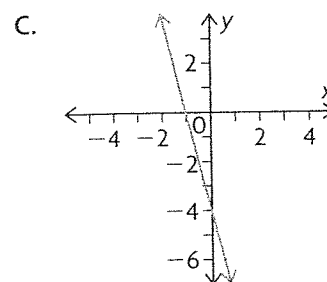
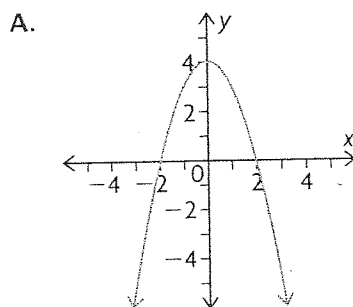
- e) line of best fit
- f) intercepts



2. Match the equation with its graph.

- a) $y = 4x - 8$
- b) $y = -4x - 4$

- c) $y = x^2 - 3$
- d) $y = -x^2 + 4$



Now on your own:

- Evaluate each algebraic expression if $a = 0$, $b = 1$, $c = -1$, and $d = 2$.
 - $b + 3c$
 - $3b + 2c - d$
 - $2a^2 + b^2 - d^2$
 - $(a + 3b)(2c - d)$
- Does the point $(2, -1)$ lie on the line $y = -3x + 5$?
 - Does the point $(-4, 10)$ lie on the parabola $y = -2x^2 - 5x + 22$?
- Is $(2, -1)$ a solution of $2x - y = 5$? Explain.
 - Is $(-1, 29)$ a solution of $y = -2x^2 - 5x + 22$? Explain.
- For each linear relation, determine the x -intercept, the y -intercept, and the slope.
 - $2x + 3y = 12$
 - $-x + 4y = 8$
- Expand and simplify.
 - $(x + 7)(x - 3)$
 - $(a + 6)(a + 6)$
 - $(2x - 5)^2$
 - $(m - 9)(m + 9)$
- Expand and simplify
 - $3(x - 6)(x + 5)$
 - $3a(a - 5) - (2a + 1)(a - 7)$
 - $-2n(2n + 1) + (n + 2)^2$
 - $3(2x + 1)^2 - 2(3x - 1)^2$

**Answers:
Let's Try these together:**

- (i)
 - (iv)
 - (v)
 - (vi)
- B
 - C
 - D
 - A

Now on your own:

- 2
 - 1
 - 3
 - 12
- yes
 - yes
- $x^2 + 4x - 21$
 - $a^2 + 12a + 36$
 - $3x^2 - 3x - 90$
 - $a^2 - 2a + 7$
- $4x^2 - 20x + 25$
 - $m^2 - 81$
 - $-3n^2 + 2n + 4$
 - $-6x^2 + 24x + 1$
- Yes. When I substitute 2 for x and -1 for y into $2x - y$, the equation $2x - y = 5$ is true.
 - No. When I substitute -1 for x and 29 for y , the equation $y = -2x^2 - 5x + 22$ is false.
- 6; 4; $-\frac{3}{2}$
 - 8; 2; $\frac{1}{4}$